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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/797,511

03/10/2004

Len D. Twetan

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MEDTRONIC, INC.

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EXAMINER

MALAMUD, DEBORAH LESLIE

ART UNIT

PAPER NUMBER

3766

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/797,511	Applicant(s) TWETAN ET AL.	
	Examiner Deborah Malamud	Art Unit 3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because of minor informalities. See attached PTO-948. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re*

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Ockert, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 1-3 and 5-14 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-3 and 5-14 of copending Application No.

11/097,682. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 6-8 and 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Rawat et al (U.S. 2005/0134520). Rawat discloses (paragraph 0007) “a radio frequency antenna assembly is disposed in a connector header of an implantable medical device. The connector header, also referred to as a header, is fabricated of an insulating material and the antenna assembly is fabricated of conductive material.” See

Figure 1. The examiner considers this to be a housing, a header coupled with the housing and an antenna disposed within the header. Rawat further discloses (paragraph 0053) "FIG. 5 is a perspective view of header assembly (500) including antenna (505) in header (100C)." In the figure, the "antenna includes a monopole antenna structure having feed line (510)." The examiner considers the antenna shown in Figure 5 to have a serpentine configuration.

Regarding claim 2, the examiner considers the antenna of Figure 5 to have a continuous serpentine configuration and to comprise a plurality of generally linear antenna segments interconnected in an alternating end to end configuration by arcuate antenna segments.

Regarding claims 3-4, Rawat discloses (paragraph 0054) the antenna "is positioned within header (100C) such that lead connectors, and other conductive surfaces, are no closer than approximately 25 mils." The examiner considers this to teach an antenna evenly spaced from a side surface of the header, at a distance of approximately 10-100 mils from the side surface.

Regarding claim 6, Rawat discloses (paragraph 0053) "header (100C) includes connector block (555) having five electrical lead connectors (550)." The examiner considers this to be a connector header having at least one connector port.

Regarding claims 7-8, the examiner considers the serpentine portion of the antenna shown in Figure 5 to define a plane disposed between a side surface of the header and the connector port. This plane is also disposed between the connector port and the housing.

Regarding claim 10, the examiner considers the serpentine portion of the antenna shown in Figure 5 to be generally parallel with a major wall of the header.

Regarding claim 11, the examiner considers the space between the connector block and the heading wall to be a channel with a constraining length.

6. Claims 15-18, 21-29, 31, 33 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Haussler et al (U.S. 2002/0105467). Haussler discloses (paragraph 0005) "a surface mount chip antenna for a wireless communications device" that "includes a conductive trace having two or more leads that are soldered to the circuit board of the device. The main lead is soldered to the feed from the transceiver circuit and the other leads are soldered to the ground plane. The conductive trace forms a serpentine pattern parallel to the circuit board creating a radiating element." See Figure 4. The examiner considers this to be a telemetry antenna comprising a proximal end section having an antenna connector, a distal end opposite the proximal end section and a serpentine portion disposed between the proximal and distal end sections. The functional language and introductory statement of intended use, have been carefully considered but are not considered to impart any further structural limitations over the prior art. Since Haussler utilizes a serpentine antenna for wireless communication as claimed by the applicant, Haussler's antenna is therefore capable of being used in an implantable medical device. In addition nothing prevents Haussler's antenna from being used in implantable medical telemetry. Therefore, it is capable of being used in an implantable device.

Regarding claim 16, the examiner considers the element 24 of Figure 4 to illustrate first antenna segments that are generally linear in at least one dimension, and second antenna segments that are arcuate.

Regarding claim 17, the examiner considers that the length of the first antenna segment illustrated as element 24 in Figure 4 is greater than a length of the second antenna segment.

Regarding claim 18, Haussler discloses (paragraph 0020) "trace (24) preferably has a serpentine configuration having a plurality of parallel elements (26)." The examiner considers this to teach the first antenna segments are generally parallel to one another.

Regarding claims 21-23, the examiner considers the view of the trace shown in Figure 5 to illustrate a telemetry antenna comprised of a plurality of serpentine portions that are interconnected. The interconnecting segment could be described both as generally linear in at least one direction and curvilinear.

Regarding claims 24-26, the examiner considers that the system inherently has a distal segment interconnecting the serpentine portion and the distal end. According to Figure 5, this segment could be described both as generally linear in at least one direction and also curvilinear.

Regarding claim 27, the examiner considers Haussler's system to inherently contain a serpentine portion formed from a substrate having a cross sectional width defining a major planar profile and a cross-sectional height defining a product length planar profile and a product width planar profile. See Figures 4-6.

Regarding claims 28-29, 31, 33 and 35, the examiner considers the trace shown in Figure 5 to have a cross sectional width greater than the cross sectional height. The serpentine portion has a linear configuration in the product length planar profile. The serpentine portion also has a linear configuration in the product width planar profile.

Claim Rejections - 35 USC § 103

7. Claim 5, 9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rawat et al (U.S. 2005/0134520). Regarding claim 5, Rawat discloses the claimed invention but does not disclose expressly the spacing of the antenna 50 mils from the side surface of the header. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. Therefore, it would have been an obvious matter of design choice to position the antenna approximately 50 mils from the side surface of the header.

Regarding claim 9, Rawat discloses the claimed invention but does not disclose expressly the plane defined by the serpentine portion disposed between a pair of the connector ports. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the serpentine configuration plane as taught by Rawat, with the plane disposed between a pair of the connector ports, because the applicant

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has not disclosed the spacing provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the applicant's invention to perform equally well with the configuration shown in Figure 5, as taught by Rawat, because the antenna wirelessly communicates with an external apparatus. Therefore, it would have been an obvious matter of design choice to modify the antenna configuration to obtain the invention as specified in the claim.

Regarding claims 12-13, Rawat discloses the claimed invention except for an antenna length of either between 1-4 inches or between 2-3 inches. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an antenna length of between 1-4 or between 2-3 inches, since it has been held that discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 14, Rawat discloses the claimed invention except for multiple serpentine portions. It would have been obvious to one having ordinary skill in the art at the time of the invention to include more than one serpentine portion, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

8. Claims 19-20, 30, 32, 34 and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haussler et al (U.S. 2002/0105467). Regarding claims 19-20 and 38, Haussler discloses the claimed invention but does not disclose expressly the pitch of the serpentine portion of the antenna. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ (1984), the

Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. Therefore, it would have been an obvious matter of design choice to modify the serpentine portion of the antenna to obtain the invention as specified in the claims.

Regarding claims 30, 32, 34 and 36, Haussler discloses the claimed invention but does not disclose expressly the at least a portion of the antenna with a curvilinear configuration in the product length planar profile and in the product width planar profile. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the length and width of the antenna as taught by Haussler, with at least a portion being curvilinear, because the applicant has not disclosed the curvilinear width or length provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the applicant's invention to perform equally well with linear profiles as taught by Haussler, because Haussler's invention is capable of communicating data wirelessly, as claimed by the applicant. Therefore, it would have been an obvious matter of design choice to modify the antenna to obtain the invention as specified in the claims.

Regarding claim 37, Haussler discloses the claimed invention except for the titanium substrate. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a titanium substrate, since it has been held to be within the

general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 39-40, Haussler discloses the claimed invention except for an antenna length of either between 1-10 inches or between 2-3 inches. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an antenna length of between 1-10 or between 2-3 inches, since it has been held that discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Malamud whose telephone number is (571) 272-2106. The examiner can normally be reached on Monday-Friday, 8.00am-5.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571)272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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